

What's In It?

The Origins and Instigators of America's Pure Food Legislation

By Annika Mechelke

Nutrition Facts

1 Serving of Public Health Policy

Serving Size: The Pure Food and Drug Act and The Meat Inspection Act

Amount per serving

Calories **1906**

% Daily value

Journalism	15%
Public Opinion	25%
Science	15%
Industry	20%
Government	25%

“Imagine if we had a food system that actually produced wholesome food. Imagine if it produced that food in a way that restored the land. Imagine if we could eat every meal knowing these few simple things: What it is we’re eating. Where it came from. How it found its way to our table. And what it really cost. If that was the reality, then every meal would have the potential to be a perfect meal.”

~ Michael Pollan, The Omnivore’s Dilemma

Introduction

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Up until the early 20th century, food and drug production was largely unregulated in the United States, which was the only Western nation at the time lacking proper food manufacturing and processing policy. Adulterated food littered the market, and consumers unknowingly ingested toxins, waste, bacterial pathogens, chemicals and preservatives. Early American chemists were quick to recognize the extensive adulteration of food, with products from milk, tea and coffee to spices and breads being tampered with and modified, advertised as being wholesome despite the food industry's "nefarious practices." As chemical analysis emerged within the USDA, a wide variety of compounds were identified as being added into foods to artificially induce colors and flavors, act as preservatives, or make cheap ingredients appear as quality products, including formaldehyde, salicylic acid, borax, arsenic, copper, lead, alum, dusts, stones, shells, zinc, acids, sand and tar amongst many more. Wisconsin Senator Robert M. La Follette lamented that the industry had "ingenuity, striking hands with cunning trickery, compounds a substance to counterfeit an article of food. It is made to look like something it is not; to taste and smell like something it is not; to sell something it is not, and so deceive the purchaser." Despite scandals, including the notorious 1899 Beef Court contesting the quality of meat fed to U.S. soldiers in the Spanish-American War and a multitude of cases of injurious preservatives being identified in foods nationwide, lawmakers and scientists were unable to overcome political and industrial opposition to instate policy protecting consumers and regulating the American food supply. However, an opportune moment in 1906 set the stage for the United State's first pure food legislation. Muckraking journalist Upton Sinclair published The Jungle, a fictional account of Chicago's packingtown that, while aiming to elucidate the plight of immigrant workers, uncovered disgusting and dangerous conditions in the meatpacking industry. Under the massive public uproar that ensued, chemists and government officials were able to finally overcome industry opposition and implement America's first pure food and drug legislation, which paved the way for further policy changes in later decades.

Inspired by pure food crusader Dr. Harvey Wiley's poem, "I Wonder What's In It" (1899), this anthology of poems explores the circumstances and historical actors that produced the 1906 Pure Food and Drug Act and Meat Inspection Act. In considering the role of journalists, public opinion, scientists, industry and government in the birth of pure food legislation, it is possible to comprehend how public health policy emerges and the factors that influence both its creation and implementation in society. Such an understanding is necessary as America continues to navigate a landscape of food additives, flavors, and ultra processed foods within its industrialized food manufacturing system of the 21st century.

I Wonder What's In It?

Dr. Harvey Wiley, 1899

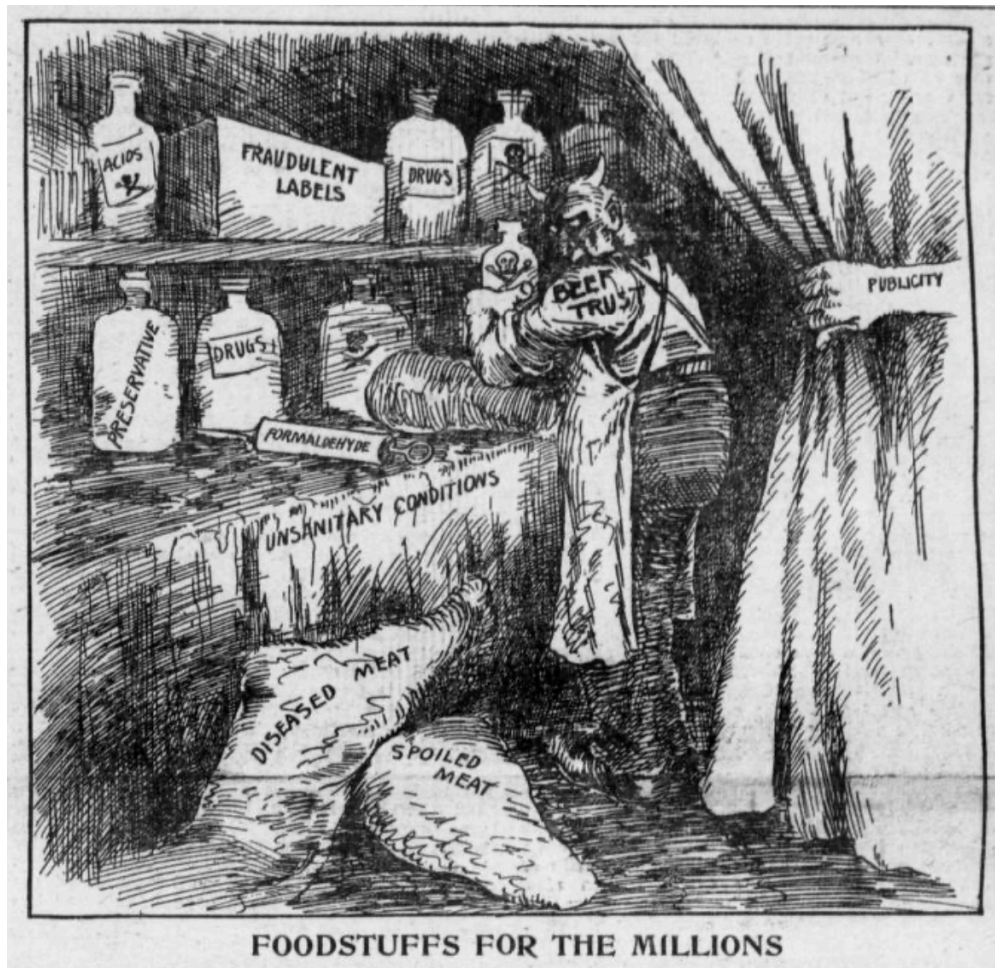
We sit at a table delightfully spread
And teeming with good things to eat,
And daintily finger the cream-tinted bread,
Just needing to make it complete
A film of the butter so yellow and sweet,
Well suited to make every minute
A dream of delight, and yet while we eat
We cannot help asking, "What's in it?"

O maybe this bread contains alum and chalk,
Or sawdust chopped up very fine,
Or gypsum in powder about which they talk
Terra alba just out of the mine;
And our faith in the butter is apt to be weak,
For we haven't a good place to pin it.
Annatto's so yellow and beef fat so sleek.
Oh, I wish I could know what is in it!

The pepper perhaps contains cocoanut shells,
And the mustard is cotton-seed meal;
The coffee in sooth of baked chicory smells,
And the terrapin tastes like roast veal.
The wine which you dink never heard of a grape,
But of tannin and coal-tar is made,
And you could not be certain, except by the shape,
That the eggs by a chicken were laid.

And the salad that bears such an innocent look,
And whispers of fields that are green,
Is covered with germs, each armed with a hook,
To grapple with liver and spleen.
No matter how tired, and hungry, and dry,
The banquet how fine, don't begin it
Till you think of the past and the future and sigh,
Oh! I wonder, I wonder what's in it?

Journalism



It's A Jungle Out There

Lace up your shoes and get your hands dirty
A man has to be something of a detective
Sweat blood to expose the truth
And muckrake to reveal the defective
It's a jungle out there

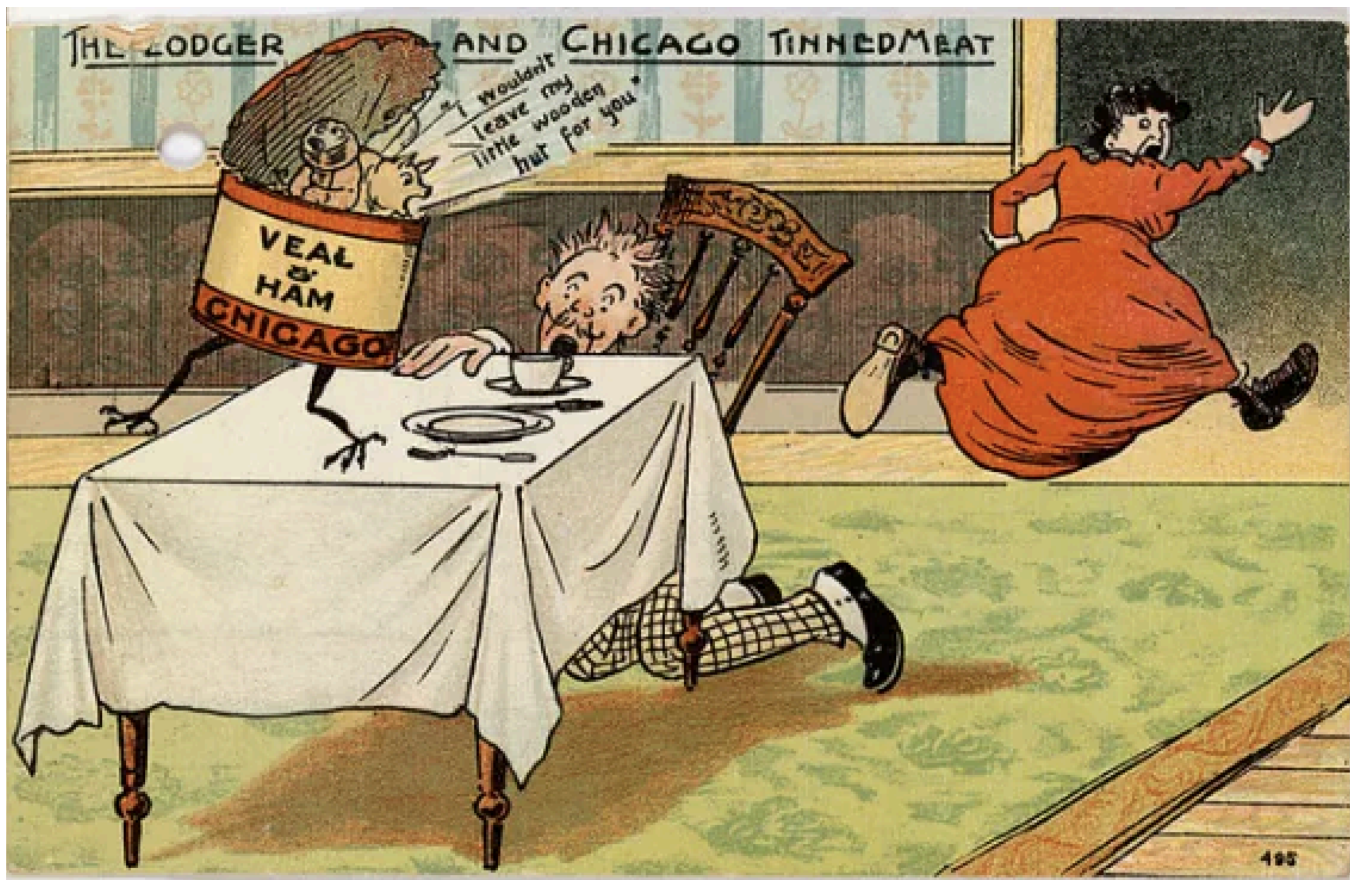
I saw conditions past belief, endless horrors
Business-like nonchalance, a city corrupt
Men treated like dogs, not unlike the hogs
This operation reeks of rot, I must interrupt
It's a jungle out there

Aimed for the heart, but hit the stomach
My sensational novel you only hope is untrue
Wake up to the deceit, wake up to the filth
An explosion is coming, one long overdue
It's a jungle out there

You label me with hysterical temperament
Call me a socialist if you dare
Perhaps I meddle, perhaps I was reckless
But you cannot hide this affair
It's a jungle out there

I am the heart and soul of reform
For the blissfully ignorant, I'll force your hand
Hurry, hurry, go see for yourself
And take radical action on the condemned
It's a jungle out there

Public Opinion



Slaughter of Americans

Take no thought for your life
What ye shall eat or what ye shall drink
An abominable lack of consideration not yet illegal
But they will lose their contest with the people

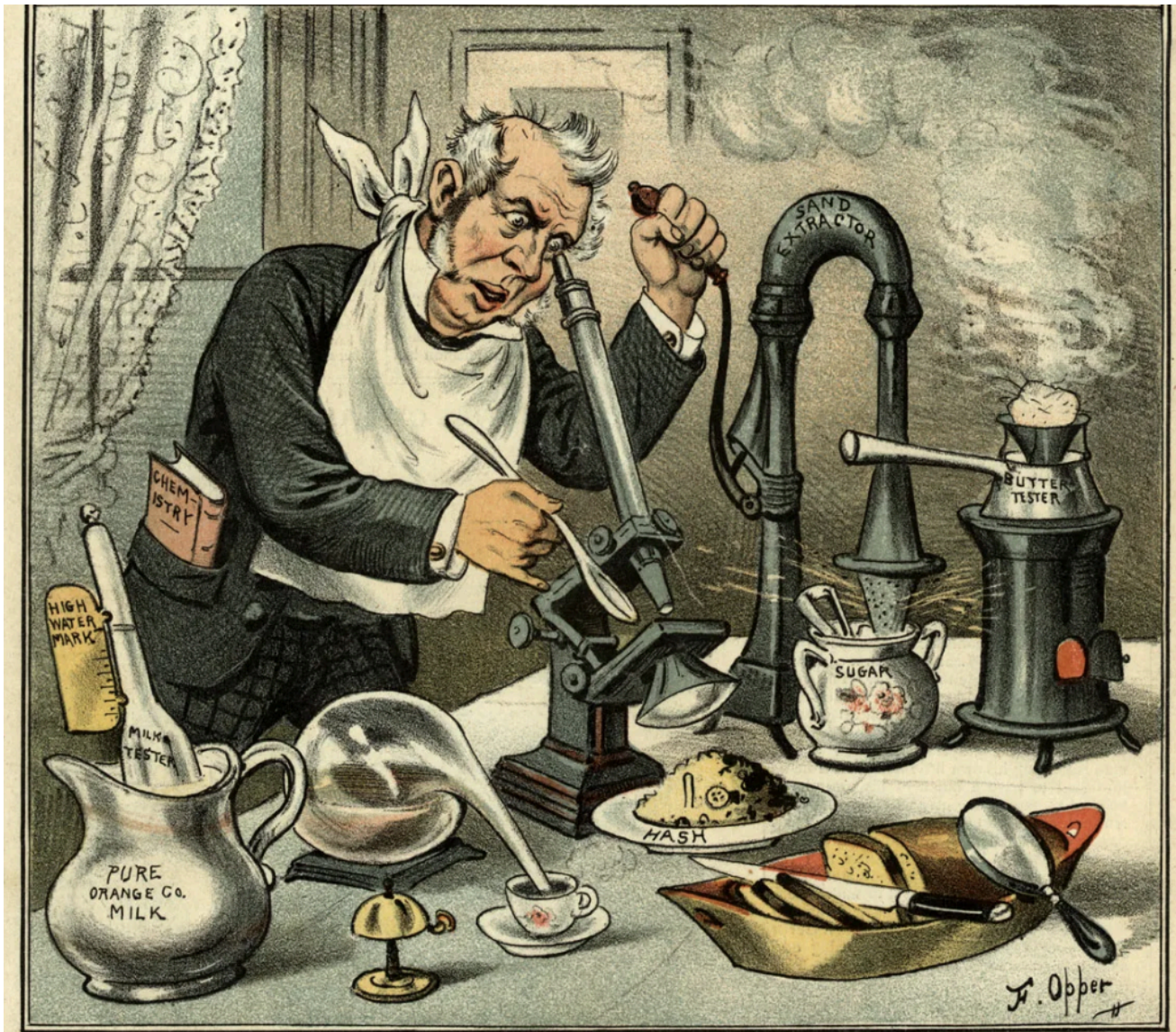
Scandal upon scandal comes to light
Embalmed beef and milk kills soldiers and children, left and right
The country's homes flooded with falsification
Our copper-lined bellies products of adulteration
Packers established a despotism of graft
Dangers concealed until muckrake revealed, at last

Every citizen has been corrupted without exception
For pure food, where's our right of selection?
We've been cheated, deceived and demagogued
Hypnotized and pettifogged
How much longer shall we tolerate this food?
We trusted our country and ate the poison it spewed

This American slaughter has seen no end
So we'll send our angry waves of popular discontent
Truth should not be suppressed, guilt should not be spared
In protecting our health, this country has erred
The people have a right to be shown
What's in a commodity ought to be known

Congress awake! Your bleeding country calls!
Congress awake! Be to the people true!
The consumer will get what he wants, asks and pays for
Disgust and disease must be no more
Don't bargain with offense or outraged cries
While they aim at our lives, don't sit supinely by
Consumer protection ought to amend broken constitutions
Safeguard us from this fraud, finally provide a solution
Every meal a disgrace for far too long
Let us do away with it, let us right these wrongs
Congress awake! Your bleeding country calls!
Congress awake! Be to the people true!

Science



LOOK BEFORE YOU EAT—
AND SEE IF YOU CAN DISCOVER ANY UNADULTERATED FOOD.

At The Hygenic Table

A meal under the microscope
Gives quite a scare
A grocery store or a chamber of horrors?
Only the brave dare eat the fare

Misbranding in respect of character hides
Very deadly substances indeed
Copper, chromium, zinc, tin and lead
Sawdust in pepper, magnesium silicate in tea
Salicylic acid, sulfuric acid
Sodium benzoate, formaldehyde
Syrup is sweet with sodium sulphite
Sausage of borax and coal-tar dye
Honey made with glucose, not by bees
Alum in pancakes and bread
Combinations unfit for human consumption
Consumed and never condemned

The people want to know the facts
And they want to know them straight
The hygienic table of the Bureau of Chemistry
The uncertain diners await

Determined to quash all nefarious practices
Relentless foe of all who deal in adulterations
Unafraid to lock horns with the president
The Pure Food Man fights for legislation

Manufacturers and legislators can't deny evidence
Analyses, reports and self-sacrificing individuals
Our offerings upon the altar of science
Lay groundwork for radical change unconditional

But victory is fruitless when the law itself is poison
Weak inspection meets inconsequential penalty
Standards of purity proposed and debated
Pure food law stands only monumentally

Poisonous and harmful substances still abound
With experts blind, deaf and dumb not all toxins expelled
The righteous must denounce pure food's enemies
So let the label tell!

Industry



THE BEEF TRUST IS BOSS.

The Result Is To Be War

That everything should decay is a law of nature
This decay must be arrested to supply the demand
Ingenious methods of art and mystery must be employed
To overcome competition and supply the demand
You compel us to keep your commodities cheap
So our manufacturing technique must supply the demand
The law lacks explicit detail, so our hands are clean
We'll do what it takes to supply the demand

Yet the scientist questions our methods
Yet the muckraker ensures we are misrepresented
Yet the lawmakers want to see us apprehended
It's cheaper to fight than to conform
Unfair! Unjust! Untrue!
For this foul blow, the result is to be war!

Our howls will deafen the department
Such accusations fall without ample evidence
Scare stories are fiction with no foundation in fact
We have nothing to hide, so don't overreact
Your food has not one atom of any condemned animal
Our self-interest in business makes such deceit damnable
And the science is prejudiced, narrow-minded and excess
Your "experts" don't understand poison versus harmless

Are we to question what a man shall eat and drink?
Penalize him if it's not what those chemists think?
Are people not made ill by riding on railroad trains?
Why not prohibit railroads then, shall we start a campaign?
And what does injurious even mean?
It seems somewhat arbitrary, so can you really intervene?
Under our control, this country has flourished
Nonsensical legislation has no place, this is an injustice

If you insist on regulation
To our shrill chorus you must listen
We'll adhere to inspection, but we won't pay the costs
We'll no longer mislead, but your penalty must be soft
And setting standards is difficult, so your fight is just beginning
Our poison trust may have lost this battle, but we may still be winning
In putting this statute in place, you've succeeded
But until you enforce it, we've yet to be defeated

Government



Playing With Fire

Shabby bills on the floor of the house
Knocked around, time and time again thrown out
The Beef Trust has filled an immunity bath
And poor bills drown from the industry's grasp
There is but one vast employing trust
Stubborn opposition puts laws to bust
Though when the people finally demand bread over stone
A push for policy gains some backbone

A single muckraker and the public is floored
Into the White House, telegrams pour
Only investigation can prove such grave allegations
And our reports show clear evidence and validation
Uneatable, unpalatable, and unwholesome
Utterly unsafe and unfit, the packingtown scum
I suppose I would rather have eaten my hat
Now the moment is upon us, born from outcry and fact

Devilish evils call for remedy at last
Against arrogant, selfish greed of the capitalist
While momentum is swinging we'll secure the passage
To the Beef Trust we'll finally send a strong message
Require inspection and supervision from hoof to can
And let's not forget dear Old Borax, who's long taken a stand
We'll protect consumers from this great American fraud
Prohibit adulteration and poisons, no more facade

This effort required more than official recommendation
Popular measures can trump political ones taken
And under allied force influence, some concessions were made
No one ever said law was simple to navigate
Though we did play with fire, reform is complete
The president's hand strong in the public's white heat
It may not be perfect, but it's a triumph nonetheless
Paving the way for greater oversight and regulation, we'll progress

Concluding Remarks

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This poetic anthology illustrates the role of various actors in the theater of public health policy, considering how journalists, public opinion, scientists, industry and government officials contributed to the development of the Pure Food and Drug Act and the Meat Inspection Act in 1906. Passed during a great shift in momentum of the pure food movement, this pure food legislation was monumental and the first to properly address food quality and manufacturing the United States, setting standards for preservatives and ingredients put into food, recognizing 11 dangerous ingredients, adding the country's first labeling requirements and requiring further inspection and supervision of food products at multiple stages of production. However, as this anthology suggests, this legislation had multiple shortcomings in its vague use of terminology, lenient penalties against manufacturers, and in creating difficulties in imposing regulations on harmful additives. In fact, sodium benzoate, which Dr. Wiley found to be injurious, never overcame obstacles imposed by the Pure Food and Drug Act and is still used as a food additive today. Pure food legislation was improved throughout the 20th century, with the 1906 policies providing an excellent basis for improving consumer protection. In 1911, the Sherley Amendment addressed false therapeutic claims and eliminated deception of consumers by drug companies and in 1938, the Food, Drug and Cosmetics Act required FDA approval of new drugs and increased federal oversight.

Despite considerable advancements, the pure food movement continues into the 21st century. In the late 1900s, the “get big or get out” mindset led to the reconsolidation of American meat, agricultural and pharmaceutical industries, reintroducing a similar dynamic between industry and government as observed prior to 1906. Today, America is dominated by industrial agriculture, fast food, vast monocultures of commodity crops and operations maximizing production at the expense of worker, animal and consumer welfare. With oversight responsibilities distributed across the FDA, USDA and EPA, and in having manufacturers provide their own data, America continues to navigate a landmine of food additives, preservatives, flavors, pesticides and emulsifiers that are potentially toxic to health yet included in the majority of food products without proper standards in place. The ultra-processed food landscape has deprived Americans of nutrients and increased exposure to toxins in ways that threaten health across generations and have contributed to the rise in metabolic disease. Cultural shifts in modern society have created a demand for fast, cheap food that incentivizes government and industry to continue manufacturing food without regard for the health of the nation, and outbreaks of disease and abuse of immigrant workers in food manufacturing mirror food production schemes of 1906. In this unsustainable food environment, it is time for the American people to yet again rise on the backs of modern muckrakers like Eric Schlosser and Michael Pollan to advocate for pure food. History has shown that it is only when the public educates themselves, wields scientific evidence and actively invests in a movement that legislators will listen and defy opposition. It has been over a century since 1906, but the pure food fight is far from over.

Oh TBHQ!

Oh Tert-butyl hydroquinone, oh TBHQ
What I wouldn't give to take back what I know about you
After 1906, I thought I was saved
But with you in my system, I may have one foot in my grave

You're generally regarded as safe, they say
But such a review has little evidence in play
You've shown to cause cancer, you've shown to be toxic
Yet in my food you remain, and I don't see the logic

I know you're a preservative stopping fat oxidation
You keep my food's color and flavor, you stop degradation
And in small enough amounts, my health may not be at risk
Though you're in so many things, you could still make me sick

You caught my attention because I used you in lab
For my reporter assay, you lended your hand
Still I eat you in Cheez-its, in chocolate and cookies
In popcorn and pasta, in crackers and creams

You hide in my foods, in tiny print on the label
But of noxious effects, I know you are able
Does pure food law protect me? I'm not really sure
Perhaps when death is on their hands, a real standard will emerge

“The public must decide whether it wishes to continue on the present road, and it can do so only when in full possession of the facts. In the words of Jean Rostand ‘The obligation to endure gives us the right to know.’ ”

~ Rachel Carson, Silent Spring

Analysis: "It's A Jungle Out There"

Upton Sinclair wrote to Theodore Roosevelt on May 29, 1906, "You know that I am heart and soul in the work of forcing a reform in this matter," which perfectly encapsulates the role of journalism in the development of public health policy. Journalists of the early 20th century were labeled "muckrakers," known for uncovering the truth and not always knowing when to stop digging. Sinclair's expose of the meat industry, The Jungle, was the epitome of muckrake in the eyes of the public and President Theodore Roosevelt, as it revealed a "chamber of horrors" within the Beef Trust and Chicago's packingtown. While Upton Sinclair's actions didn't directly create the Pure Food and Drug Act or the Meat Inspection Act, his heavily publicized account of the meatpacking industry instigated massive public uproar, so much so that it prompted President Roosevelt to reach out to Sinclair and launch his own investigation into conditions of Packingtown, the Neills-Reynold Report, which eventually led to the introduction of new legislation. Journalists were the instigators of public health policy for food safety and created the momentum needed for the passage of new legislation. However, their role was limited to informing the public and government as they did not have much influence on subsequent legislative changes.

Stanza 1 portrays the concept of "muckraking" journalists using Sinclair's own descriptions of his work to show their role in revealing hidden components of society. In a letter to Theodore Roosevelt on March 10, 1906, Sinclair said that to truly inspect packingtown, "A man has to be something of a detective, or else intimate with the working-men, as I was, before he can really see what is going on." In a letter from May 1906 to Roosevelt, Sinclair elaborates on the role of journalists in exposing the truth: "I have sweat blood over it for two years; I have thought about little else than your commission for the last two months. You know, and they know, that I did everything in my power to enable them to get the truth." The use of such phrases in the poem effectively show how journalism fueled the pure food movement in publicly exposing food manufacturers from the roots of production.

In stanza 2, words such as "endless horrors," "business-like nonchalance," and "men treated like dogs," are taken from a variety of sources, including 1906 newspaper headlines, The Jungle, and interviews with Sinclair, and are integrated into the poem to convey the unprecedented shocking findings from The Jungle as well as the meatpackers abuse of power and manipulation of Chicago politics. The stanza shows how startling Sinclair's findings were in order to make readers understand how pure food legislation was born from scandal and outrage.

The third stanza communicates the public's interpretation of Sinclair's findings, opening with Sinclair's famous quote, "I aimed for the public's heart, and by accident I hit it in the stomach," which describes how society was more appalled by their conditions of their meat than the abuse of immigrant laborers. It also incorporates phrases from front-page newspaper articles, including a quote from an April 1906 issue of the *Chicago Tribune*: "The Beef Trust will get its deserts before many years roll by. The Trust press cannot hide the truth from the people. Little by little they will learn the facts, and when they do wake up, you will hear an explosion." The

stanza shows how journalists were pivotal in building the public demand necessary for the passage of radical legislation like the Pure Food and Drug Act.

Stanza 4 looks at some of the negative interpretations of Sinclair's novel and considers the skepticism President Roosevelt had for Sinclair given his political viewpoints. It thus communicates the limitations of the journalist's role in public health policy. Both Ogden Armour, a tycoon of the Beef Trust, and President Roosevelt referred to Sinclair as "hysterical," with Roosevelt particularly showing frustration with Sinclair's meddling. Such perceptions prevented journalism from inducing policy changes on its own; follow-up work by the government was necessary. Despite Roosevelt's doubts and the Beef Trust's denial, Sinclair's muckraking was still shocking enough to provoke legislative action, as shown by Stanza 5. Sinclair recognized himself as something of a hero to the public, who he called "blissfully ignorant" in regards to the nation's food supply. He wrote to President Roosevelt multiple times with suggestions on investigating packingtown and advocating for legislation. However, Roosevelt deemed such legislation to be "radical action" and needed further condemning evidence on the Beef Trust before he could make any decisions. Sinclair's work alone was insufficient. Finally, the poem's repetition of "It's a jungle out there" of course plays on the title of Sinclair's novel but also is used to show how political, social and economic climates were difficult to navigate in the wake of a profound exposé.

Analysis: "Slaughter of Americans"

When proposed legislation for food safety failed in the late 1800s, Senator Algernon Paddock of Nebraska told Harvey Wiley that "angry waves of popular discontent" would eventually be the catalyst in a successful campaign for pure food, a line used in this poem's fourth stanza. Paddock's belief in the importance of public concern in instating regulation proved to be correct in 1906, when Upton Sinclair's The Jungle sparked public outcry over the quality of meat, creating public awareness of food adulteration that had yet been unseen. Public support was pivotal in the passage of 1906 legislation and the driving force behind finally overcoming industry opposition to policy. Without strong public opinion, pure food legislation may have taken decades longer to emerge. Investment of the American people into the pure food movement was a vital, necessary component of The Pure Food and Drug Act and The Meat Inspection Act.

Stanza one establishes how food manufacturers had no regard for the health and safety of the American people. The first two lines draw from a political cartoon published in the humor magazine *Puck*, which villainized the Beef Trust in light of The Jungle. The cartoon is captioned with a Bible verse, Matthew 6:25: "Therefore I say unto you, Take no thought for your life, what ye shall eat, or what ye shall drink." The line "An abominable lack of consideration" was crafted using phrases from the 1906 Neill-Reynolds Report describing the conditions of Chicago slaughterhouses and again shows the industry's disregard for public health. The final line sets the tone for the power in public disapproval of food manufacturing practices and comes directly from a 1906 newspaper article on the Beef Trust's deceit.

The second stanza describes the revelation of truths behind the American food supply to the public. "Embalmed beef and milk" references scandals prior to 1906, including the rotten meat supplied to soldiers during the Spanish-American War. "The country's homes flooded with falsification | Our copper-lined bellies products of adulteration" is derived from phrases published in a 1910 article from *Hampton's Magazine* on the Pure Food and Drug Act, with particular reference to a poem from an unnamed Washington poet: "They poisoned our jams and our jellies, But one of these embassy fellies, Presented a plea, For the chemical pea, And now we have copper-lined bellies." A 1906 article from *The Evening World* interviewing Upton Sinclair informed the line "packers established a despotism of graft," which is used by the poem to communicate how meat manufacturers wrongly manipulated Chicago politics to avoid regulation and continue their disgusting practices, something that deeply upset the American public once Sinclair made it known. The final line is a nod to The Jungle and how Sinclair's work created newfound public interest and stake in food quality and production. Ultimately, this stanza considers how the American public began to take interest in food production only under the light of scandal.

Stanza three portrays the beginnings of the public's outrage and demand for regulation. The first two lines of the stanza again reference language used by *Hampton Magazine's* 1910 article on the Pure Food and Drug Act to depict the corruption and violation of rights faced by

the American people, and their outraged response. The third and fourth lines are taken from the quote of a citizen lamenting the failure of pure food legislation prior to 1906 (“To be cheated, fooled, bamboozled, cajoled, deceived, pettifogged, demagogued, hypnotized, manicured and chiropodized are privileges dear to us all”), which was found in James Harvey Young’s book Pure Food: Securing the Federal Food and Drugs Act of 1906. The line “We trusted our country and ate the poison” quotes the 1906 *Chicago Eagle* article “Beef Trust is Bad” and further reflects public opinion. The phrase “American slaughter” comes from “Slaughter of Americans”, the title of a 1905 series in *What to Eat Magazine*, which was used to communicate to the public the horrors behind food manufacturing to instill discontent.

Stanza four recognizes initial demands by the American people once the state of their food supply was known, showing their immense influence on legislators and in informing policy-making. “The truth should not be suppressed; the guilt should not be spared” and “The people have a right to be shown” are quoted from “How the Beef Trust Has Poisoned Peoples’ Food”, a 1906 article from a Nebraska newspaper, *The Commoner*, to portray the people’s demands for facts and honesty from food manufacturers and the government. The final line stems from a statement from an Alabama state representative in favor of pure food legislation in 1906: “If a man offers to sell me a commodity he ought to be required to state what is in it.” Such primary sources effectively show the outrage of the American people and their initial ask of government officials.

The final stanza and lines reinforce the public’s demands and use repetition of “Congress awake!” to show the forcefulness of the American people in obtaining pure food legislation. The “Congress awake!” lines were written by a Massachusetts novelist who mailed Dr. Wiley his artistic perspective on pure food law in light of disturbing findings on borax. Other lines come directly from Dr. Wiley, who communicated his vision for the Pure Food and Drug Act to *The Washington Times* in a 1904 article: “The consumer will get what he wants, what he asks for and what he pays for. The consumer is protected from the cheat and the manufacturer is prevented from cheating.” Later lines acknowledge how the public disapproved of negotiations with industry opposition to obtain better consumer protection, again quoting “How the Beef Trust Has Poisoned Peoples’ Food” from *The Commoner* and *The Chicago Eagle*’s “Beef Trust is Bad.” The word “disgrace” comes from President Roosevelt’s description of the scandal behind food production in the Neill-Reynolds Report. The final line of stanza five, “let us do away with it,” was stated by an applicant for Dr. Wiley’s poison squad when discussing the use of salicylic acid as a preservative and is reflective of public opinion of food manufacturing practices. Ultimately, this stanza concludes the poem as a strong call to the U.S. government by the American people demanding legislative changes and regulation in favor of consumer protection, which was largely effective in the passage of policy.

Analysis: “At The Hygenic Table”

The role of scientists in the instatement of pure food legislation lies in the production of evidence demonstrating food adulteration and in publicizing findings in advocacy of legislative changes. Dr. Harvey Wiley of the U.S Department of Agriculture Bureau of Chemistry was a leading crusader for the Pure Food and Drug Act of 1906 in the experiments he conducted with the Poison Squad and in his strong ties to American consumers that increased the positive reception of scientific evidence. Though chemists of the 20th century were incapable of making legislation changes themselves, their laboratory findings provided ample backing for policy when the momentum was in the favor of change and garnered public support for the pure food movement. Still, it was only when public opinion was for pure food legislation that science was able to contribute to the development of public health policy. The influence of science on public health policy is thus context-specific, with scientists having a limited role until the people and government find their work useful.

Stanza 1 introduces how science was used to reveal food adulteration. The use of “a chamber of horrors” to portray fears around food product manufacturing is derived from the title of an exhibit “The American Chamber of Horrors,” displayed by the Food and Drug Administration to increase consumer awareness of food adulteration. “Only the brave dare eat the fare” is a direct reference to the sign that hung in the Poison Squad dining room during Dr. Wiley’s experiments, and shows the precarity of food quality and ingredients in the early 20th century. The stanza shows how scientists played a necessary role in uncovering the truth behind food production, as their knowledge and technology allowed them to reveal what manufacturers tried to hide.

The second stanza is longer than all others in the poem in order to convey the extent of evidence produced by Dr. Wiley and other scientists condemning food manufacturers. Its basis is in quotes from Dr. Wiley’s 1907 book, Foods and Their Adulteration, including “Misbranding in respect of character is a form of deception which has long been established in the trade and one which cannot be condoned or excused” and the definition of products as “unfit for human consumption.” In his publication, Wiley outlines heavy metals like zinc, tin and lead as well as oxides and metal salts like copper and chromium as being unsuitable for food, which are referenced in the poem. Salicylic acid, sulfuric acid, sodium benzoate, formaldehyde and borax are included in the stanza as they were the first toxins tested in Dr. Wiley’s poison squad experiments. “Sawdust in pepper, magnesium silicate in tea” describe findings from Battershall’s 1887 publication Food Adulteration and Its Detection. Finally, the injurious components listed in other food products in the stanza come from Chemist James Shepard’s mock dinner menu in his campaign for pure food legislation. The details in this stanza reflect the high adulteration of food products prior to 1906 and the ample research showing this.

Stanzas 3 relies on newspaper articles to show the importance of scientific evidence in swaying public opinion. In light of food mishandling scandals, a 1906 article from *The Commoner* declared “The people want to know the facts, and they want to know them straight,”

which implies how scientific evidence was needed for the public to accept what they were learning about the American food supply. The phrase “The hygienic table of the Bureau of Chemistry” comes from a 1904 article on Dr. Wiley from *The Washington Times* entitled “The Man Who is Leading the Fight for Pure Food,” and depicts the significance of the USDA’s Bureau of Chemistry in informing the public and government leaders on food quality. Stanza 4 similarly implements phrases from newspapers to elucidate the public image of scientists as crusaders for pure food. The first two lines of this stanza come from the aforementioned *The Washington Times* article on Dr. Wiley and show how the public admired and supported Dr. Wiley’s fight for their protection. The phrase “lock horns with the president” is derived from a 1912 article from *The Washington Times* entitled “Conflict Between Wiley and Roosevelt,” and indicates how Dr. Wiley’s work and role wasn’t always easily accepted by government officials trying to make legislative changes.

Stanza 5 seeks to show how scientific evidence is deterministic and thus influential in policy making. It was inspired by the quote “Self-sacrificing individuals from offering themselves upon the altar of science” from a 1903 article in *The St. Louis Republic* named “Dr. Wiley’s Poison Squad Enlisted from Expert Toppers.” The final two stanzas are used to demonstrate the limits of science in legislation, namely that even when evidence was ample, politics impeded the ability of scientific evidence to enforce consumer protection. This considers the Pure Food and Drug Act as being more of a statement than an implemented policy, which was the case given more effective policy emerged in the mid-1900s. Some of the language used in these stanzas comes from a 1910 article from *Hampton’s Magazine* entitled “What Has Become of Our Pure Food Law?” that outlines the shortcomings of the Pure Food and Drug Act of 1906. The article stated “victory is fruitless...for it is the law that is being poisoned, and in its corruption every citizen is corrupted” and that, in spite of the act, “the Board of Food and Drug Control sits blind, deaf, and dumb.” It references the USDA’s Remsen Board, which Deborah Blum describes in The Poison Squad as standing in the way of the Pure Food and Drug Act’s creation of standards for injurious food additives that were identified. In the case of the Remsen Board, science was manipulated and used to discourage further regulations from being set in place. Dr. Wiley himself is also referenced in these stanzas: “No set of authorities can equitably execute a food law without a set of standards of purity for their guide” and “I propose to devote the remainder of my life...to the promotion of the principles of civil righteousness and industrial integrity, which underlies the Food and Drugs Act.” His words show that even in the face of adversity and opposition, true scientists continue to use their findings to advocate for public health. The final line, “Let the label tell!” was the slogan for the 1906 pure food campaign and illustrates how scientific evidence was implemented in policy with the addition of labels recognizing injurious additives in food products, making the public more aware of their food supply.

Analysis: “The Result Is To Be War”

The Beef Trust and food manufacturers were a strong opposing force to the introduction of the Pure Food and Drug Act or the Meat Inspection Act, as it was costly to their business interests as well as to their reputations. Given strong connections of industry and the Food Manufacturers Association to government officials, food manufacturers were able to prevent legislation from being implemented for years until public outcry from The Jungle made it impossible for President Roosevelt not to address issues in food production. Though legislation was passed, continual industry opposition prevented new policies from being entirely effective by ensuring legislators accommodated some industry demands. This meant that the legislation introduced in 1906 didn't completely protect consumers, such that America required further legislation in later decades. While industry couldn't prevent pure food legislation from emerging in 1906, their influence ensured the policy introduced was somewhat lenient and met some of their demands.

Stanza 1 was largely inspired by E.C. Johnson, secretary of the Food Manufacturers Association, who justified the practices of food manufacturers as being in the interest of market demand and not illegal. In a 1908 issue of *The American Food Journal*, he stated “that everything should decay is a law of nature...decay must be arrested and fermentation stopped to supply the demand of mankind.” This shows how industry leaders believed their techniques to be necessary to their role in the American food supply. The stanza uses repetition of “supply the demand” to emphasize this industry logic, as well as the phrase “you compel us to keep your commodities cheap”, which is derived from Jesse P. Battershall's 1887 publication Food Adulteration and Its Detection. The line “ingenious methods of art and mystery” shows how the food industry thought their preservative and food modifying methods were revolutionary, and comes from Accum's A Treatise on the Adulteration of Food and Culinary Poisons (1820). This stanza seeks to communicate how food manufacturers didn't see their food production techniques as being injurious but rather designed to meet the public's needs and to allow them to make a profit. It thus establishes their motives for opposing pure food legislation.

The second stanza addresses how the Beef Trust and food manufacturers felt under attack by the Bureau of Chemistry, Upton Sinclair and President Roosevelt in 1906, finding, as a 1910 *Hamptons Magazine* article said, it “cheaper to fight than to conform to regulations”. The words “unfair”, “unjust”, “untrue”, and “a foul blow” were used by Ogden Armour of Armour & Company, a leader of Chicago's Beef Trust, in light of Sinclair's accusations of packingtown, and reflect industry response and dismay to the revelations being made on the American food supply. “The result is to be war” is a line from a 1906 *New York Times* article detailing the response of pro-industry legislators to the release of the Neill-Reynolds report investigating packingtown conditions. It shows the industry's perception of the pure food movement as an attack on their practice and how they were willing to do whatever it takes to prevent policy from changing their business and lessening their profits.

Drawing from phrases like “Since Dr. Wiley made his accusations...there has been a howl from the manufacturers all over the country that has nearly deafened the department”, “the packers have nothing to hide” and “[the reports are] scare stories made up by stock-yard Munchausens” from *The New York Times* in 1906, stanza 3 is used to show how the Beef Trust denied Upton Sinclair’s exposé as well as how food manufacturers questioned the legitimacy of chemists like Dr. Wiley as tactics of agnotology. “Not one atom of any condemned animal” and “self-interest” are from Ogden Armour’s published response defending Armour & Company from accusations and again reflect strong industry opposition and denial to information revealed by journalists and scientists. The words “prejudiced” and “narrow-minded” quote E.C. Johnson’s interpretation of Dr. Wiley’s findings and show industry skepticism and mockery of scientific evidence.

The fourth stanza consists of actual arguments from food manufacturers made against the 1906 pure food legislation as in the words of E. C. Johnson of the Food Manufacturers Association and Rhode Island Senator Aldrich, who had ties to industry. In doing so, the stanza shows the strong influence of industry in creating doubt around pure food legislation that swayed legislators. Furthermore, the stanza calls to attention the shortcomings of the Pure Food and Drug Act, namely that its definition of “injurious” amongst other terminology were left vague, making it difficult to enforce. The final stanza further touches on the ineffectiveness of legislation under what *The New York Times* called the industry’s “shrill chorus.” The Wadsworth Amendment to the Meat Inspection Act, originating from Chairman Wadsworth’s industry connections, ensured taxpayers, not packers, would pay the costs of inspection. The stanza also references how the industry’s influence over legislators resulted in minimal penalties for food adulteration, as well as how difficult it was for Dr. Wiley to implement his scientific findings of toxins in food and set regulatory standards against strong industry opposition and the Remsen Board. The poem’s last two lines effectively communicate how the Pure Food Act was more of a statement than an effective measure of consumer protection as a result of industry opposition. The final stanzas effectively convey the strong role of industry in the creation of public health policy through their connections to government officials and in creating doubts and misinformation around evidence provided by journalists and scientists.

Analysis: “Playing With Fire”

Governmental initiative was pivotal in the passage of the Pure Food and Drug Act and Meat Inspection Act, yet it was only successful in the wake of strong public opinion from publication of The Jungle. Under enormous public pressure, President Roosevelt conducted his own investigation into packingtown (the Neill-Reynolds Report), which prompted near immediate enactment of new food safety legislation. Strong government advocacy for reform was derived from both public opinion and mounting scientific evidence on the dangers of early food preservatives. When the moment was finally optimal and the issue popular, government officials were the true instigators of installing pure food legislation, driving a successful passage of policy that overcame industry opposition unlike before. Furthermore, legislators played a key role in mediating compromise between scientists and industry with pure food policy by recognizing the influence of both groups and accommodating both sides' demands in order to pass the Pure Food and Drug Act and Meat Inspection Act. The quick work of legislators and their navigation of a tense social, economic and political landscape drove the passage of pure food legislation.

Stanza 1 outlines the failed attempts of congress to pass adequate regulation on the food industry and meatpackers prior to 1906, drawing from a quote from *Life Magazine*: “Who is that shabby looking, patched-up individual trying to get on the floor of the House? O, that’s old Pure Food Bill. When he first came around here he looked pretty good, but now he has been knocked around and changed so much that his friends don’t know him at all. In a minute you’ll see him thrown out bodily again.” This quote shows how government officials had significant influence in the passage of policy, but their ability to pass legislation was context-specific. The stanza also employs phrases from newspapers in the early 1900s to portray the immense influence of food manufacturers (ex. “immunity bath”). A phrase derived from Algernon Paddock, 1887-1893 Senator for Nebraska, leads into the next stanza to convey how public opinion was the driving force in prompting government reformative action: “Take heed when people demand bread that you continue not to give them a stone.” Only when public opinion was strong did legislators take a more active stance in passing pure food legislation.

Stanza 2 aims to show how the government needed to find their own evidence in response to what President Theodore Roosevelt dubbed Sinclair’s “grave allegations” before deciding to take reformative action on packingtown. While muckrakers revealed issues in the American food supply, the government still needed their own confirmation of the findings to proceed with instigating change. Words and phrases used in the stanza are primarily from President Roosevelt’s 1906 communications with Upton Sinclair and his release of the Neill-Reynolds Report and show government response to allegations against the food industry. Descriptions of conditions of the meat, including “Uneatable, unpalatable, and unwholesome” etc. and “I would rather have eaten my hat”, come directly from Roosevelt’s testimony regarding embalmed beef in the Spanish-American War in 1899, an experience that likely shaped his appalled reaction to the exposé of the meatpacking industry in 1906.

Stanza 3 is used to describe the introduction of legislation for meat inspection and pure food. The first two lines employ words from Roosevelt's letters to Sinclair to show how the government used vilification of the Beef Trust to finally pass legislation, including inspection "from the hoof to the can", which Roosevelt directly recommended to Congress. The lines on "Old Borax" recognize how the government also used evidence from Dr. Wiley's experiments and the Department of Agriculture to inform the Pure Food and Drug Act of 1906 in order to address "The Great American Fraud", a title dubbed by *Colliers Magazine* in 1905 to describe food adulteration in the United States. Stanza 3 again illustrates how government action drives legislative changes when the social and political climate is opportune, as well as how their changes to policy are informed by a variety of actors in public health.

The final stanza acknowledges how the government can be accredited for the introduction of food safety legislation but was only able to oppose industry through compromise when under immense public pressure. Phrases from the *New York Times* in 1906, like "playing with fire" and "president's strong hand" effectively convey the bargaining relationship of the government and industry. "White heat" as well as the line "Popular measures can trump political ones taken," are derived from a 1910 *Hamptons Magazine* critique of the Pure Food and Drug Act and communicate the strong influence of the public on reform. The final two lines of the poem demonstrate how President Roosevelt and Congress saw the Meat Inspection Act and Pure Food and Drug Act as highly progressive, despite industry complaints and concern from the public and scientists that the protective measures instated were still not enough. In passing any legislation at all, the government saw their actions in the pure food movement successful. The last line of the poem shows how the 1906 legislation opened the door for further regulation, including the Sherley Amendment and 1938 Food, Drug and Cosmetics Act.

Analysis: “Oh TBHQ!”

“Oh TBHQ!” draws from my personal experiences with the modern concept of pure food to present the failures of pure food legislation in the 21st century to adequately regulate food additives. With responsibility falling on food manufacturers themselves to provide data for regulating food and on loose standards within the FDA, America poorly regulates food additives, emulsifiers and preservatives today similar to the limited regulation observed in the early 20th century. When researching modern food manufacturing practices last summer, I was exposed to a variety of food additives still being used today despite dangers having been identified whilst reading books like Pandora’s Lunchbox by Melanie Warner. In my research, tert-butyl hydroquinone (TBHQ) caught my attention for its use in a wide range of processed food products despite evidence of its tumorigenic effects in animals and potential to harm the human digestive tract. I especially took note of TBHQ because, as an undergraduate researcher working in a cancer lab, I happened to use TBHQ in one of my laboratory experiments, only to go home and see it on the ingredient label of my Cheez-it crackers. Though the FDA has established a toxic level of TBHQ that manufacturers are required to stay below, the use of TBHQ across many food products makes it possible to consume at toxic levels and have drastic metabolic consequences for human health. The more I read about TBHQ, the more I came to understand the limitations of existing federal oversight and how toxins are still highly present in the American food system. This poem playfully captures what I’ve since learned of TBHQ and acknowledges how current pure food legislation fails us. While I recognize that TBHQ is listed on food labels thanks to policies like the Pure Food and Drug Act and that it is recognized by the FDA and food manufacturers, it still poses a health risk that government officials and food manufacturers tend to downplay. Knowing about TBHQ asks one to consider what other injurious additives may be present in food and “generally regarded as safe,” which is a considerably loose and unreliable definition, or not regulated at all in the 21st century. It also poses the question of what it will take to remove such potentially harmful additives from the American diet today.

Primary Sources

Books

- Accum, Friedrich Christian. *A Treatise on Adulterations of Food, and Culinary Poisons*. London: Longman, Hurst, Rees, Orme, and Brown, 1820.
<https://archive.org/details/treatiseonadulte00accurich/page/n5/mode/2up>.
- Armour, Ogden. *The Packers, the Private Car Lines, and the People*. 1906. Philadelphia: H. Altemus Company. Accessed March 29, 2024.
<https://archive.org/details/packersprivatec02armogooog/page/n378/mode/1up>.
- Battershall, Jesse P. *Food Adulteration and Its Detection*. 1887. Reprint, New York and London: E. & F. N. Spon, 2017. <https://www.gutenberg.org/files/54004/54004-h/54004-h.htm>.
- Sinclair, Upton. *The Jungle*. 1906. Reprint, New York: Fine Creative Media, Inc., 2003.

Images

- Opfer, Frederick. *Look Before You Eat*. March 12, 1884. Puck Magazine. *Library of Congress Prints and Photographs*. <https://www.loc.gov/item/2012645181/>.

Journals

- Johnson, E. C. "Benzoate of Soda in Food Products." *The American Food Journal* 3, no. 1 (January 15, 1908). <https://babel.hathitrust.org/cgi/pt?id=uiuo.ark:/13960/t8wb30b23&seq=15&q1=benzoate+of+soda>.

Letters

- Roosevelt, Theodore. *Theodore Roosevelt to Upton Sinclair, March 15, 1906*. Letter. From W. W. Norton & Company Studyspace, *Give Me Liberty! An American History, 2nd Edition, 2007*. <https://wnnorton.com/college/history/foner2/contents/ch18/documents05.asp> (accessed March 20, 2024).
- Roosevelt, Theodore. *Theodore Roosevelt to Upton Sinclair, April 11, 1906*. Letter. From W. W. Norton & Company Studyspace, *Give Me Liberty! An American History, 2nd Edition, 2007*. <https://wnnorton.com/college/history/foner2/contents/ch18/documents05.asp> (accessed March 20, 2024).
- Roosevelt, Theodore. *Theodore Roosevelt to Upton Sinclair, May 29, 1906*. Letter. From W. W. Norton & Company Studyspace, *Give Me Liberty! An American History, 2nd Edition, 2007*. <https://wnnorton.com/college/history/foner2/contents/ch18/documents05.asp> (accessed March 20, 2024).
- Sinclair, Upton. *Upton Sinclair to Theodore Roosevelt, March 10, 1906*. Letter. From W. W. Norton & Company Studyspace, *Give Me Liberty! An American History, 2nd Edition, 2007*. <https://wnnorton.com/college/history/foner2/contents/ch18/documents05.asp> (accessed March 20, 2024).
- Sinclair, Upton. *Upton Sinclair to Theodore Roosevelt, April 10, 1906*. Telegram. From W. W. Norton & Company Studyspace, *Give Me Liberty! An American History, 2nd Edition, 2007*. <https://wnnorton.com/college/history/foner2/contents/ch18/documents05.asp> (accessed March 20, 2024).

Sinclair, Upton. *Upton Sinclair to Theodore Roosevelt, April 10, 1906*. Letter. From W. W. Norton & Company Studyspace, *Give Me Liberty! An American History, 2nd Edition, 2007*. <https://wwnorton.com/college/history/fooner2/contents/ch18/documents05.asp> (accessed March 20, 2024).

Sinclair, Upton. *Upton Sinclair to Theodore Roosevelt, May 29, 1906*. Letter. From W. W. Norton & Company Studyspace, *Give Me Liberty! An American History, 2nd Edition, 2007*. <https://wwnorton.com/college/history/fooner2/contents/ch18/documents05.asp> (accessed March 20, 2024).

Magazines

Adams, Samuel Hopkins. "What Has Become of Our Pure Food Law?" *Hampton's Magazine*, July 1910. University of Wisconsin Madison Digital Archives. <https://babel.hathitrust.org/cgi/pt?id=wu.89077077758&seq=244&q1=pure+food+law>.

Newspapers

"A Beef Trust Crowd: Upton Sinclair Says Chicago's Government is Owned by the Beef Trust." *Chicago Eagle*, October 20, 1906. Chronicling America: Historic American Newspapers. Lib. of Congress. <https://chroniclingamerica.loc.gov/lccn/sn84025828/1906-10-20/ed-1/seq-1/>

"Beef Trust Methods." *Charlevoix County Herald* (East Jordan, Mich.), July 7, 1906. Chronicling America: Historic American Newspapers. Lib. of Congress. <https://chroniclingamerica.loc.gov/lccn/sn96076839/1906-07-07/ed-1/seq-8/>

"Colonel Disputes Wiley's Claim to Pure Food Fame." *The Washington Times*, August 30, 1912. Chronicling America: Historic American Newspapers. Lib. of Congress. <https://chroniclingamerica.loc.gov/lccn/sn84026749/1912-08-30/ed-1/seq-4/>

"Debate on the Pure Food Bill." *The Salt Lake Herald*, June 23, 1906. Chronicling America: Historic American Newspapers. Lib. of Congress. <https://chroniclingamerica.loc.gov/lccn/sn85058130/1906-06-23/ed-1/seq-10/>

"Dr. Wiley's Poison Squad Enlisted from Expert Toppers." *The St. Louis Republic*, December 6, 1903. Chronicling America: Historic American Newspapers. Lib. of Congress. <https://chroniclingamerica.loc.gov/lccn/sn84020274/1903-12-06/ed-1/seq-40/>

"Embalmed Milk in Omaha: Many Infants' Deaths Believed to be Due to a Preservative Fluid." *The New York Times* (1857-1922), May 29, 1899. <https://www.proquest.com/historical-newspapers/embalmed-milk-omaha/docview/95692937/se-2>.

"How the Beef Trust Has Poisoned the Peoples' Food." *The Commoner* (Lincoln, Neb.), June 8, 1906. Chronicling America: Historic American Newspapers. Lib. of Congress. <https://chroniclingamerica.loc.gov/lccn/46032385/1906-06-08/ed-1/seq-7/>

"How the Beef Trust Poisons Food: Playing with Fire." *The Commoner* (Lincoln, Neb.), June 8, 1906. Chronicling America: Historic American Newspapers. Lib. of Congress. <https://chroniclingamerica.loc.gov/lccn/46032385/1906-06-08/ed-1/seq-1/>

"Neill's Meat Report Coming In Sections: President Will Demand Passage of Beveridge Bill. Wadsworth's Seat in Peril Roosevelt May Work to Defeat Him for Re-election -- Packers Begin Defensive Campaign. Neill's Meat Report Coming in Sections." *The New York Times* (1857-1922), June 1, 1906.

- <https://www.proquest.com/historical-newspapers/neills-meat-report-coming-sections/docview/96667439/se-2>.
- "Poisoned Milk for Pupils: Report that Formaldehyde Caused Death of a Pupil in Boston". *The New York Times* (1857-1922), November 19, 1905.
<https://www.proquest.com/historical-newspapers/poisoned-milk-pupils/docview/96503305/se-2>
- "President's Threat with Meat Report: May Stop the Use of Labels that Sell Packers' Products. Revolting Conditions Shown Neill-Reynolds Reports Tells of Astonishing Uncleanliness in the Packing Plants." *The New York Times* (1857-1922), June 5, 1906.
<https://www.proquest.com/historical-newspapers/presidents-threat-with-meat-report/docview/96672017/se-2>.
- "Pure Food Lesson in the House." *The San Francisco Call*, June 22, 1906. Chronicling America: Historic American Newspapers. Lib. of Congress.
<https://chroniclingamerica.loc.gov/lccn/sn85066387/1906-06-22/ed-1/seq-1/>
- "Roosevelt on Army Beef: Testifies that the Canned Roast Stuff Sickened His Men. Would Sooner Eat His Hat." *The New York Times* (1857-1922), Mar 26, 1888.
<https://www.proquest.com/historical-newspapers/roosevelt-on-army-beef/docview/95744141/se-2>
- "Some Packers Want Report Given Out: Also Grumble Because Other Industries Aren't Exposed. Fight For A Court Review; Chicago Packers Accept the Beveridge Bill But Are Working Hard to Change It." *The New York Times* (1857-1922), May 31, 1906.
<https://www.proquest.com/historical-newspapers/some-packers-want-report-given-out/docview/96673811/se-2>.
- "The Man Who is Leading the Fight for Pure Food." *The Washington Times*, November 20, 1904. Chronicling America: Historic American Newspapers. Lib. of Congress.
<https://chroniclingamerica.loc.gov/lccn/sn84026749/1904-11-20/ed-1/seq-29/>
- "Three More Deaths Result from Effects of Infected Antitoxin." *The St. Louis Republic*, November 2, 1901. Chronicling America: Historic American Newspapers. Lib. of Congress.
<https://chroniclingamerica.loc.gov/lccn/sn84020274/1901-11-02/ed-1/seq-1/>
- "Tuberculosis and Cancer in Chicago Beef." *Chicago Eagle*, April 7, 1906. Chronicling America: Historic American Newspapers. Lib. of Congress.
<https://chroniclingamerica.loc.gov/lccn/sn84025828/1906-04-07/ed-1/seq-6/>
- "Upton Sinclair Tells About the Sufferings of the Women in Packingtown." *The Evening World* (New York, N.Y.), June 9, 1906. Chronicling America: Historic American Newspapers. Lib. of Congress. <https://chroniclingamerica.loc.gov/lccn/sn83030193/1906-06-09/ed-1/seq-3/>
- "Upton Sinclair, the Beef Trust Exposer." *Rock Island Argus* (Rock Island, Ill.), June 8, 1906. Chronicling America: Historic American Newspapers. Lib. of Congress.
<https://chroniclingamerica.loc.gov/lccn/sn92053934/1906-06-08/ed-1/seq-9/>
- "Vaccination Scare in Philadelphia." *The Scranton Tribune* (Scranton, Pa.), November 19, 1901. Chronicling America: Historic American Newspapers. Lib. of Congress.
<https://chroniclingamerica.loc.gov/lccn/sn84026355/1901-11-19/ed-1/seq-1/>

Reports

- Flannagan, John William. "Amend Meat Inspection Act." *ProQuest Congressional U.S. Serial Set Digital Collection*. Washington D.C.: House of Representatives, May 7, 1938.
https://congressional-proquest-com.ezproxy.library.wisc.edu/congressional/docview/t47.d48.10234_hrp.2310?accountid=465.
- Reynolds, James , and Charles Neill. "Conditions in Chicago Stock Yards." *Amazon AWS*. Washington D.C.: House of Representatives, June 2, 1906.
<https://wp-cpr.s3.amazonaws.com/uploads/2019/06/rooseveltletter.pdf>.
- Wiley, Harvey. "Influence of Food Preservatives and Artificial Colors on Digestion and Health: Benzoic Acid and Benzoates" *Internet Archive*. Washington D.C.: U.S. Department of Agriculture, Bureau of Chemistry, 1906.
https://archive.org/details/influenceoffoodp84wile_2/page/1072/mode/2up.
- Wiley, Harvey. "Influence of Food Preservatives and Artificial Colors on Digestion and Health: Salicylic Acid and Salicylates" *Internet Archive*. Washington D.C.: U.S. Department of Agriculture, Bureau of Chemistry, 1906.
https://archive.org/details/influenceoffoodp84wile_0/page/n1/mode/2up.

Speeches

- Roosevelt, Theodore. "Fifth Annual Message." December 5, 1905.
<https://www.presidency.ucsb.edu/documents/fifth-annual-message-4>.
- Roosevelt, Theodore . "The Man with the Muck-Rake." April 14, 1906.
<https://www.americanrhetoric.com/speeches/teddyrooseveltmuckrake.htm>.

Secondary Sources

Books

- Blum, Deborah. *The Poison Squad: One Chemist's Single-Minded Crusade for Food Safety at the Turn of the Twentieth Century*. New York, New York: Penguin Press, 2018.
- Goodwin, Lorine . *The Pure Food, Drink, and Drug Crusaders, 1879-1914*. McFarland Publishing, 1999.
- Jensen, Carl. *Stories That Changed America: Muckrakers of the 20th Century*. Seven Stories Press, 2011.
- Lawless, Kristin. *Formerly Known as Food : How the Industrial Food System Is Changing Our Minds, Bodies, and Culture*. New York: St. Martin's Press, 2018.
- Pollan, Michael. *In Defense of Food : An Eater's Manifesto*. Turtleback Books, 2009.
- Pollan, Michael. *The Omnivore's Dilemma: A Natural History of Four Meals*. New York, NY: Penguin Books, 2006.
https://library.uniteddiversity.coop/Food/Michael_Pollan-The_Omnivores_Dilemma.pdf.
- Warner, Melanie. *Pandora's Lunchbox : How Processed Food Took over the American Meal*. New York: Scribner, 2014.
- Young, James Harvey. *Pure Food: Securing the Federal Food and Drugs Act of 1906*. Princeton University Press, 2014.

Journals

Swann, John P. "How Chemists Pushed for Consumer Protection: The Food and Drugs Act of 1906." *Chemical Heritage* 24 (2006).
<https://www.fda.gov/files/about%20fda/published/How-Chemists-Pushed-for-Consumer-Protection--The-Food-and-Drugs-Act-of-1906.pdf>.

Magazines

Blum, Deborah. "How a Lawsuit against Coca-Cola Convinced Americans to Love Caffeine." *TIME*, September 25, 2018. <https://time.com/5405132/coca-cola-trial-caffeine-history/>.
Lewis, Carol. "The 'Poison Squad' and the Advent of Food and Drug Regulation ." *U.S. Food and Drug Administration Consumer Magazine*, December 2002.
http://esq.h-cdn.co/assets/cm/15/06/54d3fdf754244_-_21_PoisonSquadFDA.pdf.
Pollan, Michael. "Farmer in Chief." *The New York Times Magazine*, October 12, 2008.
<https://michaelpollan.com/articles-archive/farmer-in-chief/>.

Websites

Bramley, Anne. "How Chicago's Slaughterhouse Spectacles Paved the Way for Big Meat." *The Salt*. NPR, December 3, 2015.
<https://www.npr.org/sections/thesalt/2015/12/03/458314767/how-chicago-s-slaughterhouse-spectacles-paved-the-way-for-big-meat>.
Fulbright's U.S. History. "Meat Packing Safety Case Study: The Beveridge Amendment to H.R. 18537 'the Agriculture Bill.'" Accessed March 29, 2024.
<https://sites.google.com/view/fulbrights-u-s-history/meat-packing-regulations-the-beveridge-amendment>.
Morris, Viveca. "Break up the Modern Meat Trust." *The Law and Political Economy Project*, November 24, 2020. <https://lpeproject.org/blog/break-up-the-modern-meat-trust/>.
Rothbard, Murray N. "The Meat-Packing Myth ." *Mises Wire*. Mises Institute: Austrian Economics, Freedom, and Peace, September 19, 2019.
<https://mises.org/mises-wire/meat-packing-myth>.